

July 10, 2005

Mr. Nabil S. Fayoumi U. S. EPA - Region 5 77 West Jackson Boulevard (SR-6J) Chicago, Illinois 60604-3590

Re: Sauget Area 2 Site – October 3, 2002 Unilateral Administrative Order (UAO) Groundwater Operable Unit Monthly Report; June 1 - June 30, 2005 Reporting Period

Dear Nabil:

Attached is the Monthly Report for the Sauget Area 2 Site October 3, 2002 Unilateral Administrative Order (UAO) - Groundwater Operable Unit. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section XII, paragraph 62, <u>Progress Reports</u>. This report is for the period June 1 – June 30, 2005.

Sincerely,

Steven D. Smith

Project Coordinator

cc: Ken Bardo, - U. S. EPA

Mayor Sauget - Sauget, IL

Sandra Bron – IEPA

Mike Coffey - USFWS

Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)

Mayor Frank Bergman - Cahokia

L. Glen Kurowski - Monsanto

Cathleen Bumb - Solutia

Linda Tape - Husch & Eppenberger

Richard Williams - Solutia

Sauget Area 2 Site - Sauget, Illinois

October 3, 2002 UAO – Groundwater Operable Unit

Status Report

Date of Report: July 10, 2005

Period Covered: June 1 - June 30, 2005

Agency Actions / Communications

In an e-mail message dated June 19, 2003, U. S. EPA requested the submission of revised versions of the Focused Feasibility Study, the Remedial Design Work Plan, and the Pre-Final (95%) Remedial Design. The revisions were required to allow the use of a slurry wall rather than jet grouting for construction of the barrier wall. The revised documents were submitted on July 3, 2003. The ESD was issued by US EPA on July 30, 2003. The Final Design Submittals were approved by EPA on October 16, 2003.

Work Performed During the Reporting Period

General Site Work

- By the end of June, all site restoration work, including the cover over the temporary spoils stockpile, had been completed and the contractors had demobilized from the site.
- The draft Operations and Maintenance (O&M) Plan was submitted to the Agencies for review on June 21, 2005.
- The Pre-Final Inspection was conducted on June 28, 2005. The only item that was identified as requiring completion before the Final Inspection was conducting a pressure test on the discharge pipeline. That test will be completed by the middle of July. The only other punch list items were identified as O&M tasks, and included;
 - o Inspection of the pitless adapter in one or both of EW-1 and EW-2.
 - o Comparison over time of the flow meter readings from the totalizing flow meter at the POTW discharge point with the readings from the individual flow meters on each of the extraction wells.

- O Development of a well abandonment plan for the wells on Site R that will not be used in the future. This plan is to be submitted with the Final Report.
- o Reseeding the disturbed areas on the site in the fall of 2005.

Groundwater Treatment

• The system was operated to maintain a zero or inward gradient across the barrier wall for the first week of June. On June 9th, control of the pumping system was switched to a new program that utilizes the water levels in 8 newly installed piezometers upgradient of Site R to estimate the volume of groundwater flowing into the containment. The total pumping rate is then set to be equal to this computed inflow rate. This control system will remain in place during a 90-day Interim Operating Period. That period will begin after the discharge pipeline is successfully pressure tested, at a date agreed upon by the agency.

At about the same time that the control system was switched, the river stage began to rise and the flow gradients reversed, with flow being from west to east. This condition prevailed until approximately June 24th, with the result that pumping was not required over this period. However, extraction well EW-2 was operated between June 16th and June 24th to facilitate stormwater discharge from the on-site modutanks.

- A leak was observed from extraction well EW-3 on June 6th and the well was shut down immediately. The well casing was exposed and two small holes were observed in the pitless adapter at the T-connection with the discharge piping. The well was repaired and was put back into service on June 22nd. The soil that came into contact with the groundwater that leaked from the well was covered with HDPE and two samples of the potentially impacted material were analyzed for TCL and TAL constituents. The results showed that the material did not contain any constituents above Preliminary Remediation Goals and permission was requested from the Agency to leave the affected soils in place. That request was being reviewed and a decision is expected in July.
- Analyses of the step testing data to derive hydraulic conductivity values for the
 aquifer materials have proven to be impossible, even with the use of numerical
 modeling. A report on the analyses, with that conclusion, was submitted on June
 20th. The Agency has requested that additional details of the modeling be
 submitted for review.
- The Agency requested that a report summarizing the results of the Rossum sand content testing be submitted.
- First Quarter sampling of the performance monitoring wells was completed by the end of June.
- Water level and pumping data for the month of June are attached.

Schedule

It is currently estimated that the project will be completed by the middle of July, when the pressure test on the discharge line is complete..

Submittals During Reporting Period

A report on the attempts to analyze the step test results to provide estimates of hydraulic conductivity was submitted to the Agency during the reporting period, as was a draft O&M Plan.

Work Scheduled for Next Reporting Period

- Submit additional information on the step test analyses.
- Perform pressure testing of the groundwater discharge line.
- Continue pumping and treating groundwater using the new control program.
- Initiate the 90 Day, Interim Operating Period
- Carry out the Final Inspection.
- Analyze groundwater samples from the performance monitoring wells.

PUMPING DATA

	PUMPING RATE			GROUNDWATER LEVELS							
1											
Date/Time		Total Q	EW-1 Q	EW-2 Q	EW-3 Q	SWL	PZ-5U	PZ-5D	Delta	PZ-6U	PZ-6D
06/01/2005	Daily Average	1311.39	551.43	564.14	252.83	389.96					
06/02/2005	Daily Average	1501.97	597.08	616.55	288.34	389.33					
06/03/2005	Daily Average	1458.13	608.55	606.93	253.19	389.09					
06/04/2005	Daily Average	1459.27	601.27	601.29	256.71	389.00					
06/05/2005	Daily Average	1510.97	622.87	621.30	266.80	388.53					
06/06/2005	Daily Average	1127.87	520.18	514.38	93.30	388.82					
06/07/2005	Daily Average	412.94	228.76	184.18	0.00	392.55					
06/08/2005	Daily Average	0.00	0.00	0.00	0.00	396.71					
06/09/2005	Daily Average	0.00	0.00	0.00	0.00	396.93					
06/10/2005	Daily Average	0.00	0.00	0.00	0.00	396.43					
06/11/2005	Daily Average	0.00	0.00	0.00	0.00	396.98					
06/12/2005	Daily Average	0.00	0.00	0.00	0.00	397.67	393.57	394.12	-0.55	393.28	393.85
06/13/2005	Daily Average	0.00	0.00	0.00	0.00	396.98	393.76	394.15	-0.39	393.41	394.03
06/14/2005	Daily Average	0.00	0.00	0.00	0.00	398.49	393.98	394.48	-0.49	393.68	394.25
06/15/2005	Daily Average	0.00	0.00	0.00	0.00	400.49		395.12	-0.68	394.02	394.63
06/16/2005	Daily Average	96.93	0.00	96.93	0.00	400.93		395.52	-0.76	394.31	394.90
06/17/2005	Daily Average	241.65	0.00	241.65	0.00	399.58		395.39	-0.61	394.33	394.87
06/18/2005	Daily Average	249.97	0.00	249.97	0.00	398.21	394.82	395.21	-0.3 9	394.52	395.05
06/19/2005	Daily Average	256.73	0.00	256.73	0.00	396.33	i e	395.16	-0.23	394.61	395.14
06/20/2005	Daily Average	302.64	58.97	243.67	0.00	395.61	394.67	394.75	-0.09	394.42	394.92
06/21/2005	Daily Average	209.35	41.87	176.20	0.00	394.68		394.35	0.04	394.22	394.71
06/22/2005	Daily Average	127.00	0.00	122.43		394.16		394.36	0.02	394.26	394.79
06/23/2005	Daily Average	79.97	0.00	79.97		393.67	394.32	394.29	0.03	394.27	394.78
06/24/2005	Daily Average	158.88	79.61	79.27	0.00			394.15	0.09	394.16	394.64
06/25/2005	Daily Average	159.38	79.38	80.00	0.00			393.96	0.18	394.08	394.58
06/26/2005	Daily Average	159.99	79.99	80.00	0.00	392.61	394.07	393.87	0.21	394.02	394.52
06/27/2005	Daily Average	178.14	79.99	80.00	0.00	392.13	393.93	393.69	0.25	393.93	394.42
06/28/2005	Daily Average	187.65	80.02	31.69	75.94	391.62	393.82	393.57	0.25	393.83	394.35
06/29/2005	Daily Average	172.83	33.89	104.99	33.95	391.83		393.50	0.30	393.80	394.28
06/30/2005	Daily Average	291.57	0.00	291.57	0.00	391.78	393.74	393.48	0.26	393.69	394.14

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1								PZ-		PZ-
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Date/Time	Delta	PZ-7U	PZ-7D	Delta	PZ-8U	PZ-8D	Delta	DE	1_INSIDE	DE
06/01/2005 Daily Average)	_	_					390.17	386.47	388.73
06/02/2005 Daily Average								389.76	385.89	388.15
06/03/2005 Daily Average								389.55	385.61	387.93
06/04/2005 Daily Average								389.47	385.52	
06/05/2005 Daily Average								389.13	385.14	
06/06/2005 Daily Average								389.27	385.81	387.73
06/07/2005 Daily Average								391.24	387.95	391.07
06/08/2005 Daily Average	•							393.82	390.37	395.08
06/09/2005 Daily Average	•							394.30	390.89	395.47
06/10/2005 Daily Average	:							394.16	391.06	395.00
06/11/2005 Daily Average								394.56	391.45	395.47
06/12/2005 Daily Average		393.49	394.20	-0.71	393.45	394.07	-0.62	395.14	391.83	396.16
06/13/2005 Daily Average	-0.61	393.71	394.32	-0.60	393.57	394.02	-0.46	394.80	391.96	395.53
∬ 06/14/2005 Daily Average		393.93	394.59	-0.66	393.84	394.44	-0.60		391.79	396.88
06/15/2005 Daily Average		394.27	394.96	-0.70	394.27	395.22	-0.94		391.80	398.86
06/16/2005 Daily Average	-0.59	394.57	395.27	-0.70	394.63	395.65	-1.02	397.12	392.07	399.42
06/17/2005 Daily Average		394.60	395.27	-0.66	394.67	395.43	-0.75		391.84	
06/18/2005 Daily Average		394.78	395.39	-0.61	394.71	395.15	-0.44		391.98	396.74
06/19/2005 Daily Average		394.90	395.51	-0.61	394.76	394.97	-0.22	394.72	392.10	
06/20/2005 Daily Average		394.74	395.30	-0.57	394.52	394.52	0.00	b	392.11	394.62
06/21/2005 Daily Average	-0.49	394.51	395.11	-0.60	394.25	394.11	0.14	1	392.39	393.27
06/22/2005 Daily Average	e -0.53	394.57	395.17	-0.61	394.23	394.02	0.21	393.55	392.60	
06/23/2005 Daily Average	-0.51	394.59	395.19	-0.60	394.19	393.91	0.28		392.60	
06/24/2005 Daily Average	-0.48	394.55	395.08	-0.53	394.11	393.77	0.34		392.20	392.11
06/25/2005 Daily Average	-0.50	394.45	395.00	-0.55	393.98	393.62	0.36		392.12	391.68
06/26/2005 Daily Average	-0.50	394.35	394.96	-0.61	393.91	393.46	0.45		391.98	391.37
06/27/2005 Daily Average	-0.49	394.30	394.85	-0.55	393.80	393.31	0.49		391.92	
06/28/2005 Daily Average	-0.52	394.16	394.71	-0.56	393.64	393.08	0.57	391.87	391.83	390.41
06/29/2005 Daily Average		394.14	394.64	-0.51	393.56	393.00	0.56		391.95	
06/30/2005 Daily Average	-0.45	394.02	394.55	-0.53	393.51	392.99	0.52	391.89	391.84	390.50

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			PZ-		PZ-	
		PZ-	3_OUTSI	PZ-	4_OUTSI	PZ-
Date/Time		2_INSIDE	DE	3_INSIDE	_	4_INSIDE
06/01/2005	Daily Average	388.49	388.78	388.37		
06/02/2005	Daily Average	387.94	388.25			
06/03/2005	Daily Average	387.74	387.51	387.59	389.41	388.74
06/04/2005	Daily Average	387.66	387.16	387.33	389.29	388.63
06/05/2005	Daily Average	387.30	387.18	387.21	388.98	388.34
06/06/2005	Daily Average	387.89	387.80	387.83	389.13	389.15
06/07/2005	Daily Average	389.85	390.95	390.07	391.02	390.44
06/08/2005	Daily Average	391.81	394.78	391.59	393.58	391.63
06/09/2005	Daily Average	392.30	395.19	392.07	394.10	392.12
06/10/2005	Daily Average	392.47	394.73	392.30	393.98	392.32
06/11/2005	Daily Average	392.85	395.24	392.59	394.36	392.61
06/12/2005	Daily Average	393.18	395.81	393.02	394.91	392.95
06/13/2005	Daily Average	393.36	395.34	393.23	394.63	393.10
06/14/2005	Daily Average	393.58	396.64	393.39	395.25	393.18
06/15/2005	Daily Average	393.97	398.65	393.43	396.42	393.52
06/16/2005	Daily Average	394.14	399.30	393.68	396.92	393.82
06/17/2005	Daily Average	393.83	397.66		396.21	393.66
06/18/2005	Daily Average	393.93	396.51		395.50	393.61
06/19/2005	Daily Average	394.09	395.07		394.54	393.67
06/20/2005	Daily Average	393.83	394.53		394.34	393.65
06/21/2005	Daily Average	393.73	393.36		393.64	
06/22/2005	Daily Average	393.93			393.32	
06/23/2005	Daily Average	393.98	392.88	393.80	393.05	
06/24/2005	Daily Average	393.68	392.66	393.68		
06/25/2005	Daily Average	393.59	392.26	393.54		
06/26/2005	Daily Average	393.54	391.95	393.48	392.34	393.25
06/27/2005	Daily Average	393.40	391.56	393.28		
06/28/2005	Daily Average	393.36	391.01	392.88	391.69	392.69
06/29/2005	Daily Average	393.32	391.14	392.95	391.70	392.78
06/30/2005	Daily Average	392.98	391.13	392.74	391.70	392.70